## AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawings includes changes to FIG. 5. This sheet replaces the original sheet. In FIG. 5, Applicants have added callouts to the parts of the flow chart needing clarification and have added text in the specification describing the items identified in the flow chart.

Attachment:          Replacement Sheet

## REMARKS

Claims 1-9 are pending in the above-referenced application. The Office Action has rejected claims 1-3 and 5-9 and objected to claim 4. The specification and drawings are objected to by the Examiner. More specifically and in accord with the item numbering therein, the Office Action has:

In Item 1, objected to the Drawings with respect to FIG. 5 as requiring clarification;

In Item 2, objected to the Specification in paragraph 00019, line 3 as containing an informality; and

In Items 3, 4, and 5, rejected claims 1-3 and 5-9 as being unpatentable over NVIDIA ("OPENGL CUBE MAP TEXTURING") in view of Iourcha (US 6,373,496) and more particularly: In Item 6, rejected claim 1; In Item 7, rejected claim 2; In Item 8, rejected claim 3; In Item 9, rejected claim 5; In Item 10, rejected claim 6; In Item 11, rejected claim 7; In Item 12, rejected claim 8; and In Item 13, rejected claim 9.

Regarding Item 1, Applicants have added callouts to the parts of the flow chart needing clarification and have added text in the specification describing the items identified in the flow chart. Applicants believe that this information satisfies the Examiner's objection regarding the drawings.

Regarding Item 2, Applicants thank the Examiner for finding this error and have removed the extra word.

Regarding Item 6, the Office Action alleges claim 10 (claim 10 having a similar limitation as claim 1) is obvious over the NVIDIA reference in view of the Iourcha reference. The Office Action explains that the NVIDIA reference fails to teach or suggest the limitation "computing, based on continuity-adjusted derivatives, a level of detail (LOD) parameter for the texturing of said pixels," but that the Iourcha reference teaches this limitation at Col. 1, line 60 through Col. 2, line 65. The Office Action further alleges that it would have been obvious to one of skill in the art to which the invention pertains to have integrated the teachings of the NVIDIA reference and Iourcha reference to achieve the method recited in claim 10. Applicants respectfully traverse these allegations because

the proposed combination does not teach or suggest the cited limitation. The portion of the Iourcha reference that the Examiner relies on does not describe the use of a continuity-adjusted derivative of the texture coordinates. The cited portion of the Iourcha reference describes the general method of mip-mapping in which a hierarchy of maps is constructed to provide a level of texturing detail that correlates with the size of the pixel in texture space. In order to employ the mip-mapping technique a level of detail parameter D corresponding to a level in the mipmap must be computed. This computation is performed by taking the $\log_2$ of Jacobian norm. The integer that results from this computation gives the nearest level in the mipmap and the fractional portion gives the blending possibly needed between levels. Equations 1 and 2 describe two different ways of finding the $\log_2$ of Jacobian norm. Both use derivatives $dU/dX, dU/dY, dV/dX, dV/dY$ of the texture coordinates with respect to the screen coordinates. This method of estimating the $\log_2$ of Jacobian norm does not use derivatives that have been adjusted to maintain continuity across faces of a mapping cube so that the same level of detail will result from face to face. In fact, the Iourcha reference is completely silent about any continuity problem that might exist. Because the reference is only concerned with texture mapping of a primitive, such as a triangle, which lies in a single plane, the reference simply does not contemplate a continuity problem across multiple faces of a cube. Therefore, the proposed combination simply fails to teach each and every limitation of the claimed invention. Thus, Applicants' invention, as recited in claim 10, is unobvious over the proposed combination.

Regarding item 7 in which claim 2 (claim 11 having similar limitations) is rejected, the Office Action alleges that the proposed combination of the NVIDIA reference and the Iourcha reference teaches or suggests the limitations of claim 11, citing Col. 3, lines 15-21, 22-37 and 38-42 and Col. 2, lines 37-65 of the Iourcha reference. In the Iourcha reference, Col. 3, lines 15-21 describe equations 3-8 which include a set of map coordinate setup constants that define the relation between the pixel coordinates and the map coordinates. The portion of the reference at Col. 3, lines 22-37 gives equations 9-12 for calculating the above-enumerated derivatives. The portion of the reference at Col. 3, lines 38-42 describes the calculation of D, the mip-mapping level of detail number, using the equations 9-12. The portion of the reference at Col. 2, lines 37-65 again gives

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equations 1 and 2 for estimating the level of detail parameter D. Applicants respectfully submit that claim 11 is allowable at least because claim 10, from which it depends is allowable. Additionally, while the cited portions of the reference deal with the use of derivatives for calculating the level of detail parameter D, the reference does not describe the limitation "adjusting the texture axes of at least one of the faces based on the adjustment code to make the texture axes consistent and continuous between the faces," recited in claim 11. Because the reference only describes texturing of a primitive, such as a triangle, there is only one planar surface to which the texturing applies and no concept, in the reference, of a discontinuity from one surface to another. Therefore, the proposed combination fails to meet all of the limitations of claim 11.

Regarding Item 8, in which claim 3 is rejected, Applicants submit that claim 3 is allowable at least because claim 11 from which it depends is allowable. Therefore, the proposed combination fails to teach the limitations of claim 3.

Regarding Item 9 in which claim 5 is rejected, Applicants submit that claim 5 is allowable at least because claim 4 from which it depends is allowable. Therefore, the proposed combination fails to teach or suggest all of the limitations of claim 5.

Regarding Item 10, in which claim 6 is rejected, Applicants submit that claim 6 is allowable at least because claim 5 from which it depends is allowable. In addition, Applicants respectfully submit that the proposed combination fails to teach the limitation "wherein the step of compensating includes adding or subtracting one," recited therein because the proposed combination is silent about any compensating adjustment for a normalizing step. Therefore, the proposed combination fails to teach or suggest all of the limitations of claim 6.

Regarding Item 11, in which claim 7 is rejected, Applicants submit that claim 6 is allowable at least because claim 11 from which it depends is allowable. Additionally, Applicants submit that the proposed combination fails to teach the limitations "wherein adjusting the texture axes includes flipping the orientation of one of the texture axes of one of the faces so as to adjust the texture coordinates," recited therein. In the Iourcha reference, there is no continuity adjustment to the derivatives in equations 9-12. The Office Action has alleged that the teaching in the reference of choosing the larger of the

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two equations in Equation 1 or Equation 2, is the same as negating one of the texture coordinates. Applicants respectfully disagree. Flipping the orientation of one of the texture axes has no effect on the magnitude of the Jacobian norm because each term in the norm under the radical sign is squared. Therefore, the proposed combination fails to teach or suggest all of the limitations of claim 7.

Regarding Item 12, in which claim 8 is rejected, Applicants submit that claim 8 is allowable at least because claim 7 from which it depends is allowable. Additionally, the proposed combination fails to teach or suggest the limitation "wherein adjusting the texture axes includes compensating for the normalizing step," because the proposed combination says nothing about compensating for a normalizing step in adjusting the texture axes for continuity and consistency. Therefore, the proposed combination fails to teach or suggest all of the limitations of claim 8.

Regarding Item 13, in which claim 9 is rejected, Applicants submit that claim 9 is allowable at least because claim 8 from which it depends is allowable. Therefore, the proposed combination fails to teach or suggest all of the limitations of claim 9.
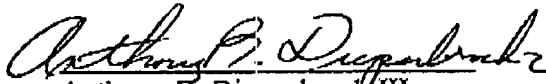
Applicants note that claims 12-20 have been added to recite the same subject matter as claims 10, 11, and 3-9 but in the form of a computer readable medium. Applicants believe that claims 12-20 are allowable for the reasons set forth above relating to the corresponding method claims.

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## CONCLUSION

Having addressed each and every ground of objection and rejection, Applicants believe that the application is in condition for allowance. Applicants respectfully request reconsideration and allowance of the pending claims 3-9 and new claims 10-20 in the above-mentioned application and respectfully request that a timely Notice of Allowance be issued in this case.
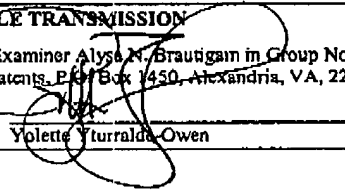
Respectfully submitted,

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